

WHAT IS CLAIMED IS:

1. A photogravure plate making method, wherein an upper end of a vertical coating pipe is placed near below one end of a photogravure plated roll chucked at both ends in a horizontal state and rotated, said coating pipe is moved up to the other end of the photogravure plated roll, positive-type photosensitive agent composed of alkaline soluble positive-type photosensitive composition having an infrared wavelength range laser sensitivity with a developing latitude where image line part exposed by the alkaline developing liquid is washed away and a non-image line part not exposed is not washed away under non-heating after forming a coated film at one end is slightly bulged out and overflowed of an upper end of said coating pipe, the photogravure plated roll is coated through a spiral coating system, upon completion of coating operation, the rotation of the photogravure plated roll is continued to form a natural dried coating film, then the photogravure plated roll is rotated to show a desired high speed, the residual solvent in the coated film is dispersed into air to reduce a concentration of the residual solvent and to form a photosensitive film, and subsequently, a positive image is exposed with an infrared wavelength range laser against the photosensitive film, either main chain or side chain of the molecules of photosensitive film forming resin at said exposed part is cut to cause it to become a lower molecule having more increased alkaline solubility, a latent image

having a photosensitive layer ablation is formed, then alkaline development is carried out, the photosensitive film forming resin at the exposed part is washed away to leave only the resist at the non-image line.

2. The photogravure plate making method according to Claim 1, wherein said positive-type photosensitive composition comprises alkaline soluble organic high molecular substance including epoxy resin having phenolic hydroxyl group or reacted with phenolic hydroxyl group and photo-thermal conversion substance for absorbing infrared rays of an image exposing light source and converting it into heat, and as adherence characteristic reforming agents, the composition includes any one of

- (1) polyvinyl polypyrrolidone/polyvinylacetate copolymers
- (2) polyvinylbutyral
- (3) styrene/maleic acid copolymers
- (4) vinylpyrrolidone/dimethylaminoethylmethacrylate copolymers
- (5) terpolymers of vinylpyrrolidone/caprolactam/
dimethylaminoethylmethacrylate
- (6) terphenenolic resin
- (7) alkylphenolic resin
- (8) polyvinylformar resin
- (9) melamine/formaldehyde resin
- (10) polyvinyl acetate, and
- (11) ketone resin.

3. The photogravure plate making method according to claim 1, wherein a surface of the photogravure plated roll is

wiped off to clean with a wiping cloth before the positive-type photosensitive agent is coated on the photogravure plated roll.

4. The photogravure plate making method according to Claim 1, wherein a surface of the photogravure plated roll for forming a photosensitive film by coating said positive-type photosensitive agent is copper, copper sulfate plating, nickel plating, nickel alloy plating or zinc plating.

5. The photogravure plate making method according to Claim 1, wherein said alkaline developing operation is carried out to wash away the photosensitive film forming resin at an exposed part and to leave only the resist at the non-image line part, and an etching is then carried out to form a cell and subsequently, the resist is peeled off with stronger alkaline developing liquid to form a plated surface.

6. The photogravure plate making method according to Claim 1, wherein the plated surface has a hard film for applying an plate wear such as a chromium plating or a nickel alloy plating enabling a quenching or ceramics and the like after said resist is peeled off.